

Initial	Date
<i>ZAE</i>	<i>1/30/07</i>
<i>CWC</i>	<i>1/29/07</i>

BA WTR
BA SD
Mail Stop 60189

JAN 30 2007

Memorandum

To: Project Leader, Lake Andes National Wildlife Refuge

From: Chief, Division of Water Resources **S/ MEGAN ESTEP**

Subject: 2006-2007 Water Use Report/Management Plan

The subject reports for Lake Andes National Wildlife Refuge and Varilek, Sherman, Broken Arrow, and Roth Wildlife Production Areas have been reviewed and approved. Thank you for incorporating last year's corrections in the report.

Attached is the completed signature page for your files. Thank you for submission of these reports.

Attachment

bcc: WTR rf

WTR:CCordova:cc:01/29/2007
I:\WATERUSE\SD\LAKE ANDES\wateruse_06.doc

LAKE ANDES NATIONAL WILDLIFE REFUGE COMPLEX

ANNUAL WATER USE REPORT AND MANAGEMENT PLAN

2006

Prepared by: Michael J. Benjamin Date: 1/16/07

Concurrence: Michael J. Benjamin Date: 1/16/07
Project Leader

Refuges Approval: Randy Kites Date: 1/22/07
Refuge Supervisor

Water Resources Review: Gayle A. [Signature] Date: 1/30/07

WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM - REPORT YEAR: 2006

STATION NAME: Lake Andes NWR MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 220-3 (Owens Bay Well) PRIORITY DATE: 7/6/1956

SOURCE: Dakota Sandstone artesian aquifer

WATER DIVERTED: YES X NO IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: well AF STORAGE: n/a

RATE OF DIVERSION: (see below) AF SEASONAL: n/a

WELLS: YES X NO FREE FLOWING: 2.22 cfs or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic:

Crop Irrigation: Stock:

Other:

INSPECTION DATA

Please complete all pertinent information for ACTUAL use versus the Water Rights data.

DATE OF INSPECTION: ~7/2006 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: diminishing flow from well

AF STORAGE: n/a OR ESTIMATED ELEVATION: n/a

WELLS: FREE FLOWING: <2 cfs OR PUMPED: n/a GPM

CONDITION OF FACILITIES: water control structures in the distribution box for the well were replaced. The casing developed a leak that was repaired. Diminished flow and deteriorating casing will require replacement of this well.

OVERALL CLIMACTIC CONDITIONS: drought

PROPOSED WATER PROGRAM: attempts to reduce flow at wellhead have caused leaking around well casing. Active management is limited.

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2006

STATION NAME: Lake Andes NWR MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 517-3 (Lake Andes) PRIORITY DATE: 4/22/1940

SOURCE: Andes Creek, Garden Valley Creek, other tributaries

WATER DIVERTED: YES ☐ NO ☒ (no longer) IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 13,721 af

RATE OF DIVERSION: n/a AF SEASONAL: 6,813 af

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

Please complete all pertinent information for ACTUAL use versus the Water Rights data.

DATE OF INSPECTION: 6/2/06 INSPECTED BY: Steve Spawn, Mike Bryant

CONDITIONS AT INSPECTION: low water, exposed shoreline

AF STORAGE: <20,634 af OR ESTIMATED ELEVATION: 1429.5' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES: Dike structures in fair condition, but will be replaced during dike rehabilitation (2007?).

OVERALL CLIMACTIC CONDITIONS: drought. Lake elevation is low. North Unit is dry.

PROPOSED WATER PROGRAM: No active management planned. Inflow is expected to be minimal.

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM - REPORT YEAR: 2006

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 5250-3 (Varilek WPA) PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on Varilek WPA and private land

WATER DIVERTED: YES ☐ NO ☒ IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 139 af

RATE OF DIVERSION: n/a AF SEASONAL: n/a

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

Please complete all pertinent information for ACTUAL use versus the Water Rights data.

DATE OF INSPECTION: ~7/2006 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: dry

AF STORAGE: <139 af OR ESTIMATED ELEVATION: <1614' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES: n/a

OVERALL CLIMATIC CONDITIONS: drought

PROPOSED WATER PROGRAM: no active management

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2006

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 5251-3 (Sherman WPA) PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on Sherman WPA

WATER DIVERTED: YES ☐ NO ☒ IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 271 af

RATE OF DIVERSION: n/a AF SEASONAL: n/a

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

*Please complete all pertinent information for **ACTUAL** use
versus the Water Rights data.*

DATE OF INSPECTION: ~7/2006 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: nearly dry

AF STORAGE: <271 af OR ESTIMATED ELEVATION: <1591.7' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES: n/a

OVERALL CLIMACTIC CONDITIONS: drought

PROPOSED WATER PROGRAM: no active management

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2006

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 5077-3 (Broken Arrow WPA) PRIORITY DATE: 10/7/1985

SOURCE: Joubert Drain

WATER DIVERTED: YES X NO IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: Dam #7 AF STORAGE: 131.2 af

RATE OF DIVERSION: unknown AF SEASONAL: n/a

WELLS: YES NO X FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic:

Crop Irrigation: Stock:

Other: recreation X

INSPECTION DATA

*Please complete all pertinent information for **ACTUAL** use versus the Water Rights data.*

DATE OF INSPECTION: ~7/2006 INSPECTED BY: Steve Spawn, Mark Heisinger

CONDITIONS AT INSPECTION: low water

AF STORAGE: <131.2 af OR ESTIMATED ELEVATION: unknown

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES:

OVERALL CLIMACTIC CONDITIONS: drought

PROPOSED WATER PROGRAM:

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2006

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 6013-3 (Roth WPA) PRIORITY DATE: 7/30/1997

SOURCE: tributary of Dry Creek

WATER DIVERTED: YES X NO IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: ditch plug in tributary AF STORAGE: 323 af

RATE OF DIVERSION: unknown AF SEASONAL: 212 af

WELLS: YES NO X FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic: X

Crop Irrigation: Stock:

Other:

INSPECTION DATA

*Please complete all pertinent information for **ACTUAL** use
versus the Water Rights data.*

DATE OF INSPECTION: ~7/2006 INSPECTED BY: Mark Heisinger

CONDITIONS AT INSPECTION: low water

AF STORAGE: <323 af OR ESTIMATED ELEVATION: <1398.5' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES:

OVERALL CLIMACTIC CONDITIONS: dry

PROPOSED WATER PROGRAM: no active management

COMMENTS: